Environmental Restoration

DON Environmental Restoration Training 2018
Washington Perspective Panel Discussion

ER,N Program Update

- ER,N Program Overview
  - Site Status
  - Performance
  - Funding Outlook
  - Execution
- Focus Areas and Initiatives
  - ACQ Strategy and Process
  - Workforce Shaping
  - Optimization
  - Systems
  - Environmental Liabilities
  - Key Program Areas

MISSION

Environmental Restoration delivers sustainable, innovative, cost effective remediation solutions with stakeholder engagement, to protect human health and the environment, maintain regulatory compliance, and maximize reuse of DON assets to support the warfighter.

VISION

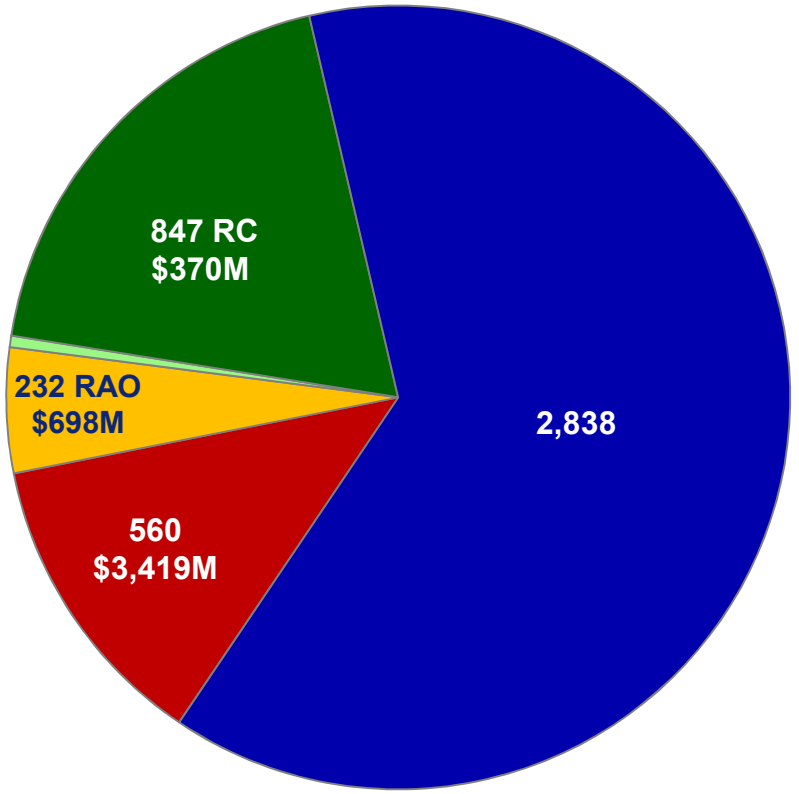
NAVFAC Environmental Restoration is a recognized leader for responsive, best value, and sustainable remediation solutions.

Rob Sadorra, MBA, MEng, P.E.
Director, Environmental Restoration Division, NAVFAC HQ
06 March 2018

ER,N Site Status

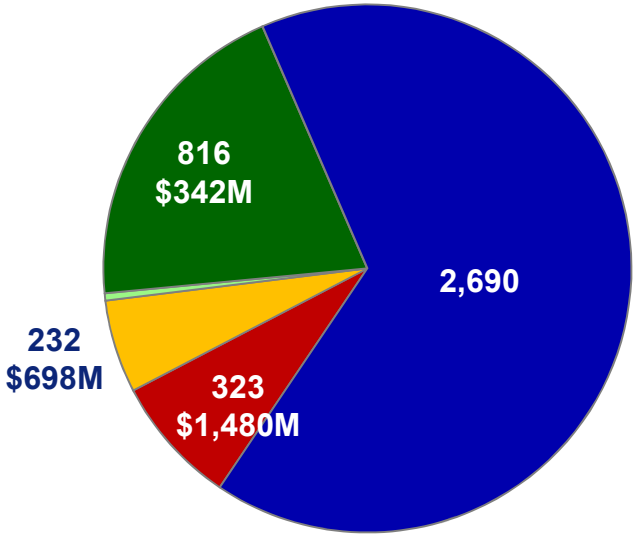
EOY FY2017

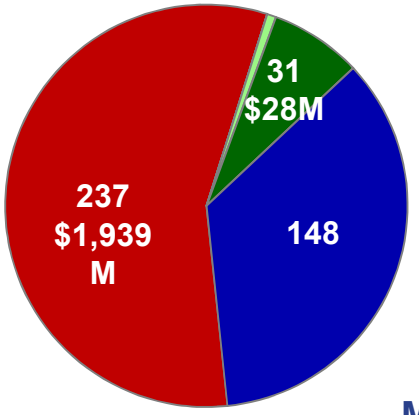
(# SITES)
($CTC)



ACTIVE CLEANUP
RAO
RC Doc Pending
RC
SC

IRP





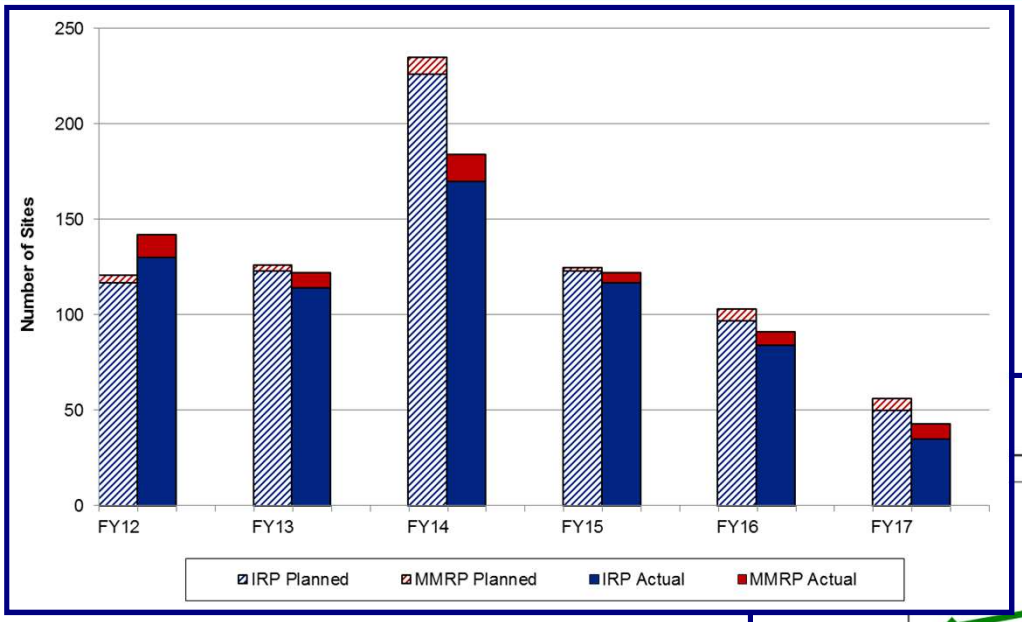
MRP

4,498 Sites
RC: 3,685 (81.9%)
$4,495M CTC = $2,528M (IRP) + $1,967M (MRP)

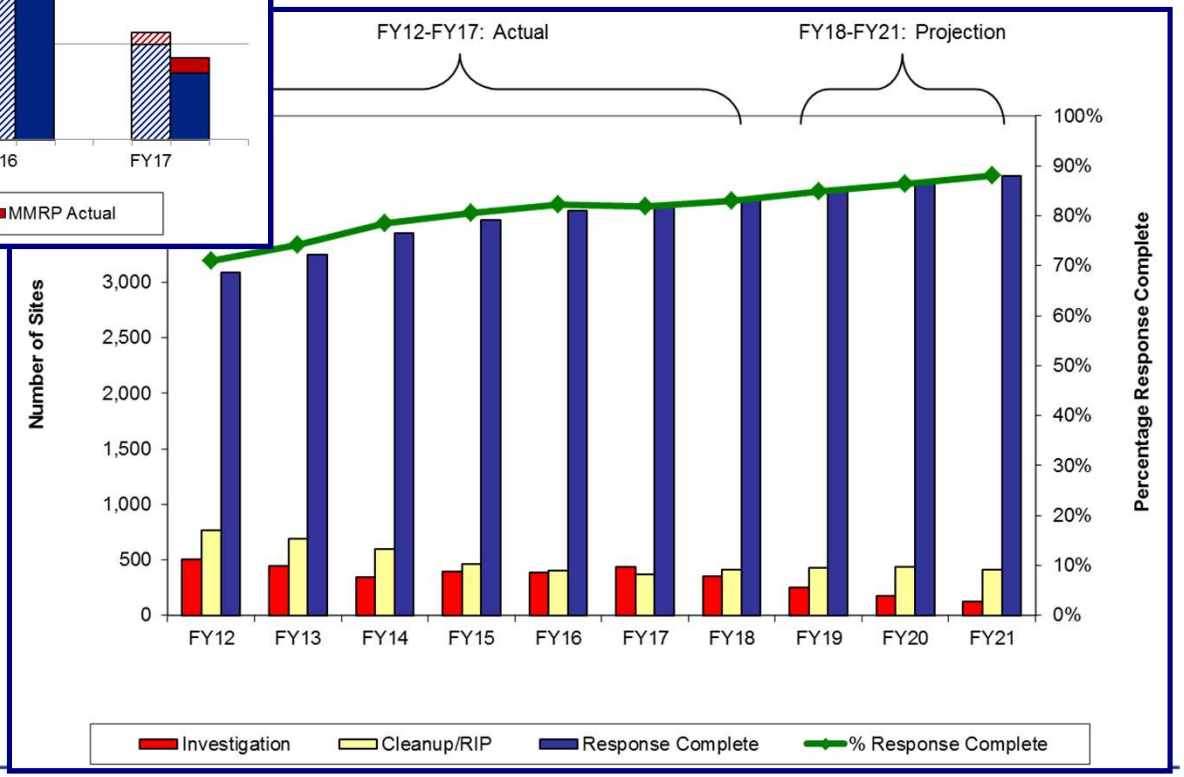
Projects Only

Much completed; Still much work remains

ER,N Performance Summary



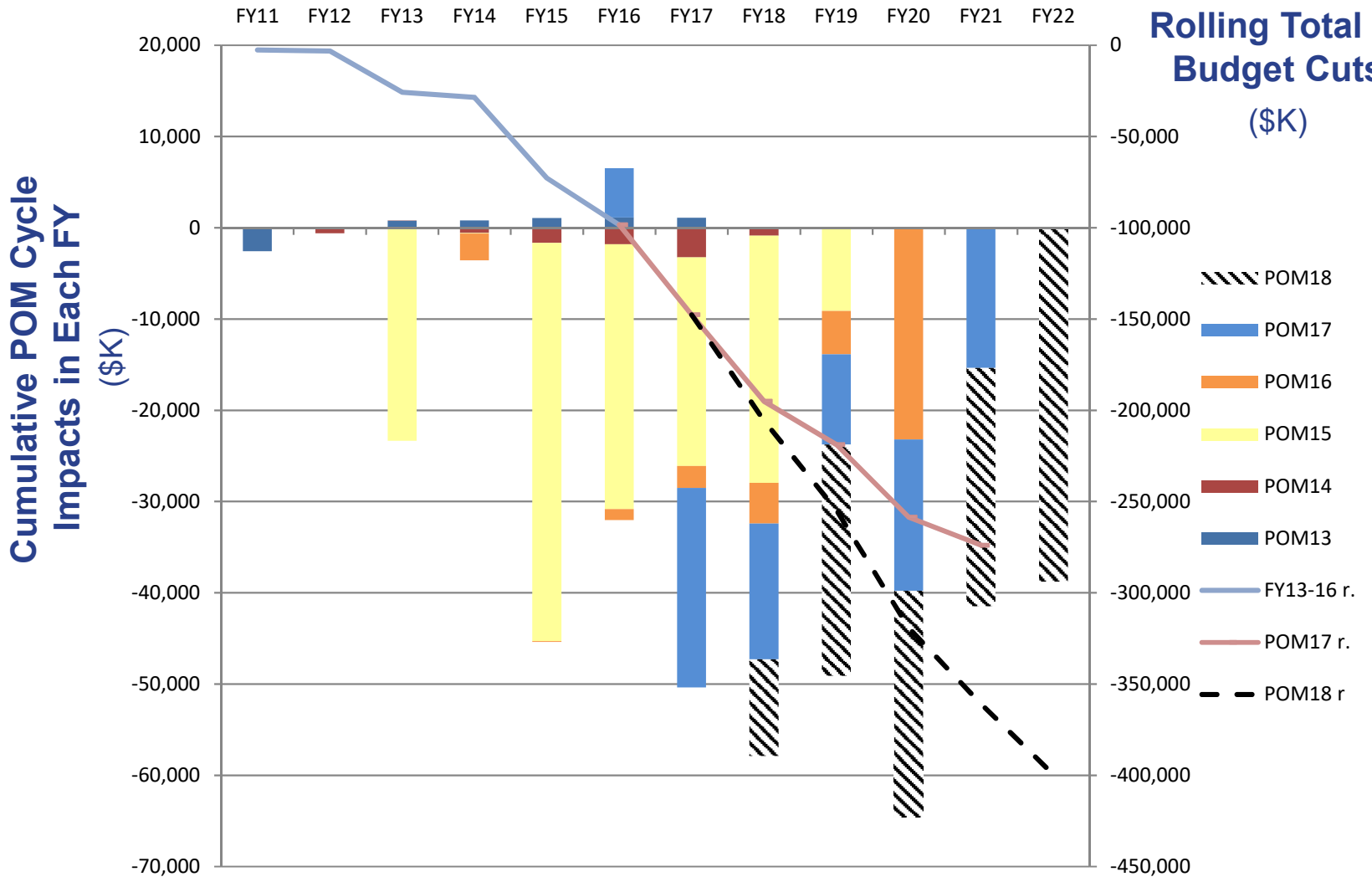
EOY 2017 PROJECTION		
TOTAL EOY18 90% of all sites RC	81.9%	83.1%
TOTAL EOY21 95% of all sites RC	81.9%	88.0%



- Projected meeting goals in FY13 prior to sequestration
- $400M in reductions in total since FY 13
- Significant new requirements and growth
- Expect steady progress as budgets improve

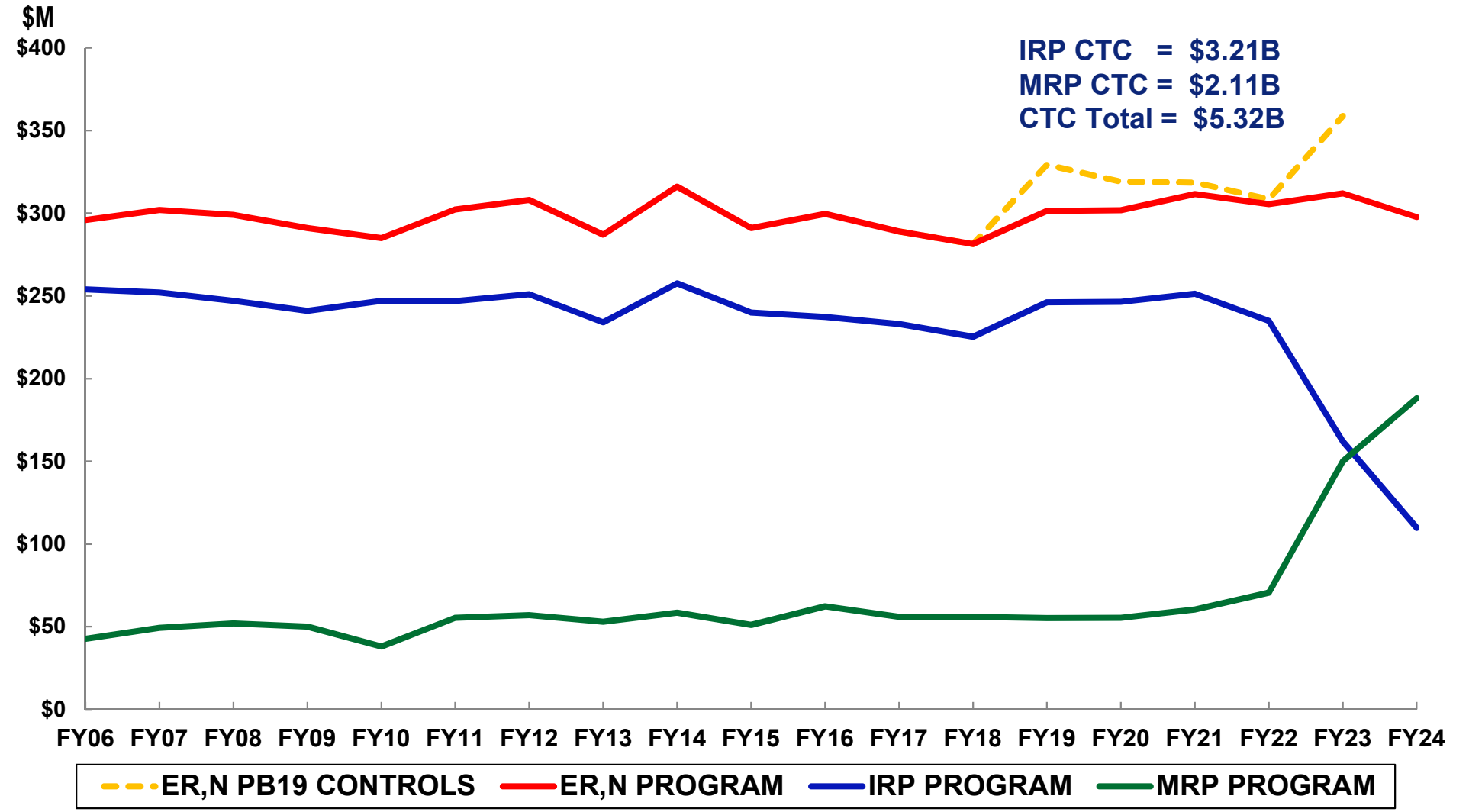
Progress is driven by funding

Sequestration Impacts to ER,N Budget



Funding uncertainty has been a significant program challenge

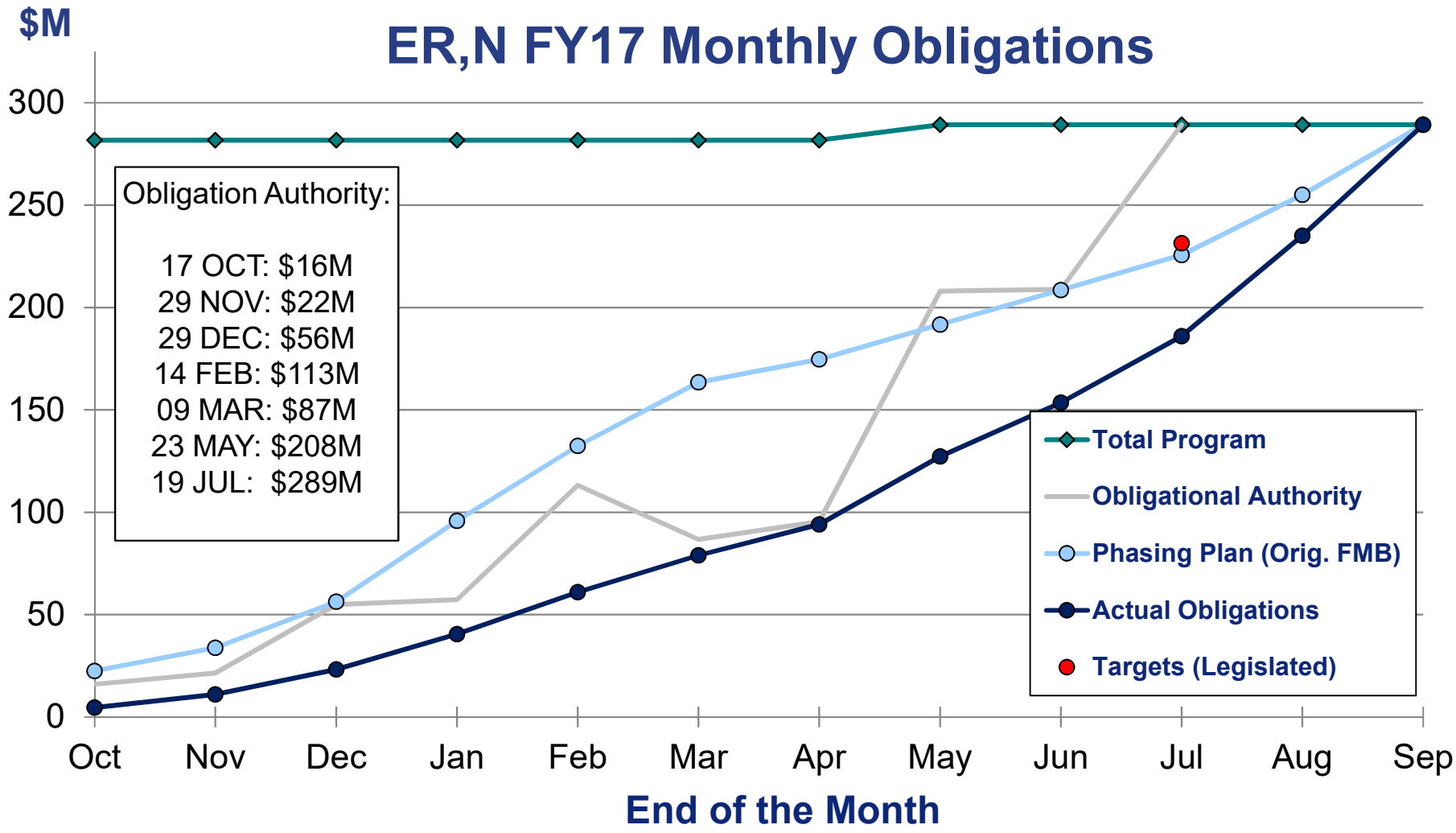
FY17 ER,N Program Funding Profile



Funding outlook is improving

ER,N Execution

Challenges in Commitment / Obligation



Must drive towards early execution

ER Focus Areas and Initiatives

- Environmental Acquisition Strategy and Process Optimization
- Workforce Shaping, Training and Retooling
- Site Optimization
- ER Systems
- Environmental Liabilities Audit Readiness
- Growing Program Focus Areas

Environmental Acquisition Strategy
FY 17-19 Vision and Objectives

Vision:

- Provide best contractual solutions
- Establish a balanced and diversified contract tool box to meet the broad array of program requirements

Objectives:

- Increase acquisition options and flexibility
- Effectively manage cost and risk
- Maintain an environment of competition
- Meet political and legislative contracting mandates

Highlights:

–$1,895M in FY17-19 contract requirements

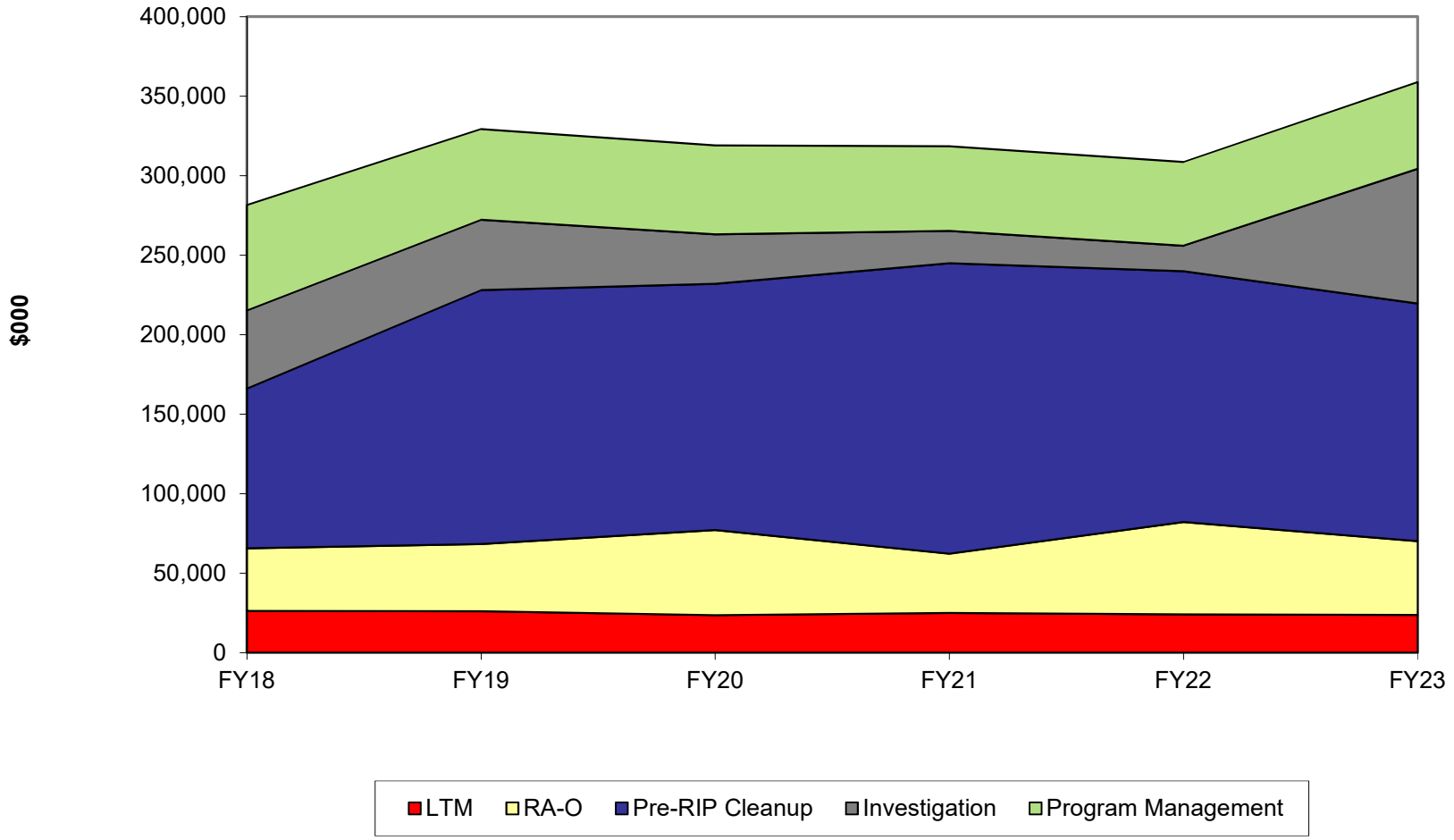
–104 new contract actions, totaling to approximately $2,863M

–Future contract opportunities posted on the NAVFAC portal:

https://www.navfac.navy.mil/content/dam/navfac/Small%20Business/PDFs/Acquisition_Strategies_Forecasts/navfac_environmental_fy17_19_forecast.pdf

Environmental Acquisition Strategy

FY18+ Spend Plan (Active Installations)



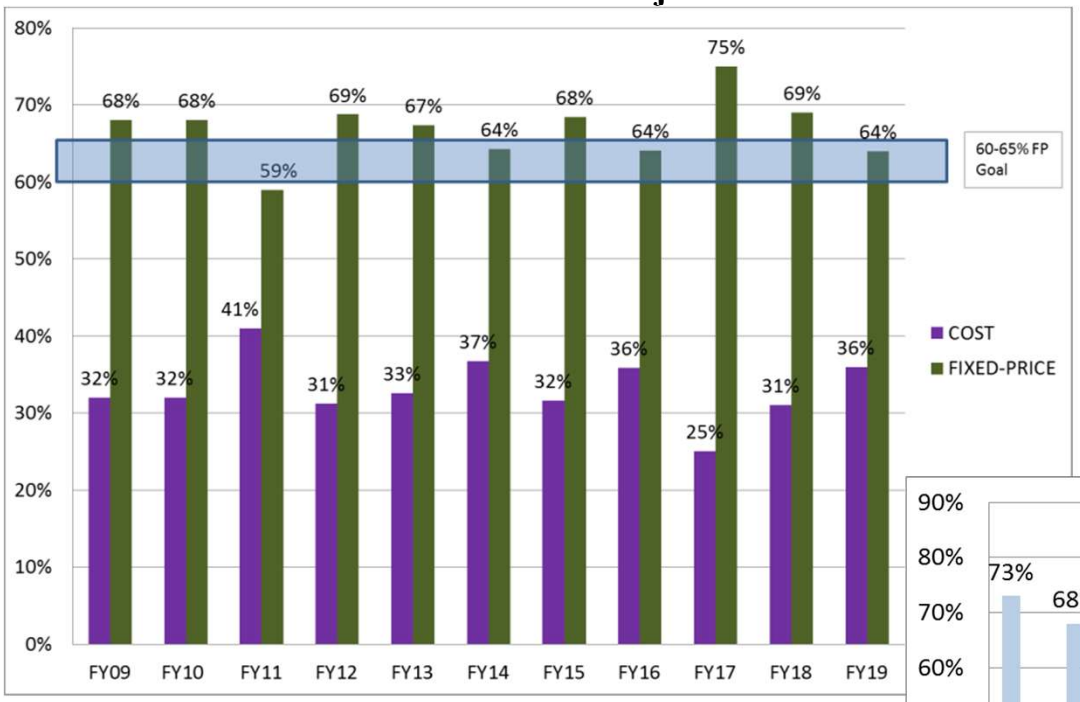
* Includes the IRP and MMRP CTC estimates

Requirements drive contract type

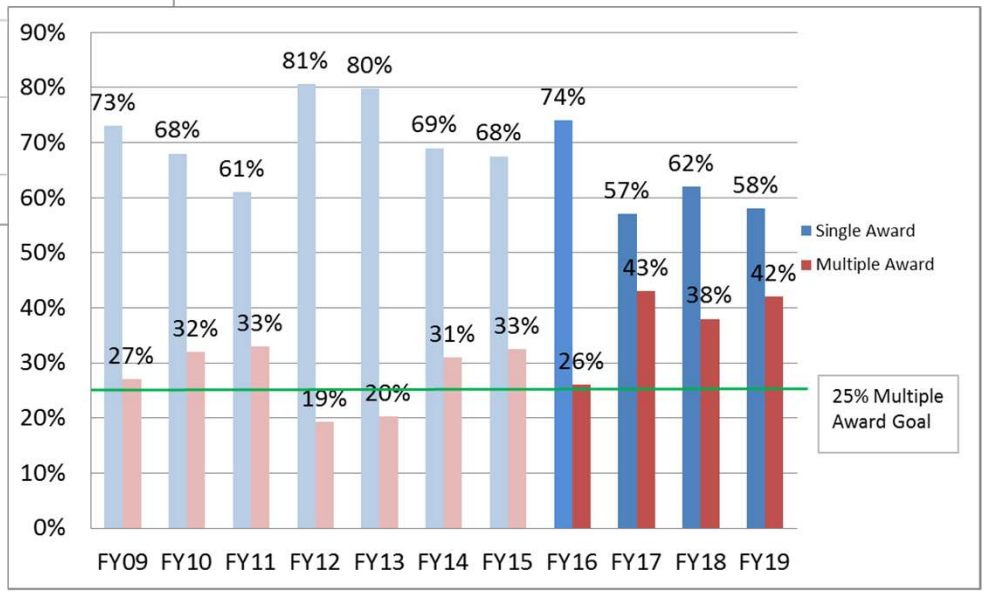
Environmental Acquisition Strategy

Metrics

Fixed Price – Trends and Projection



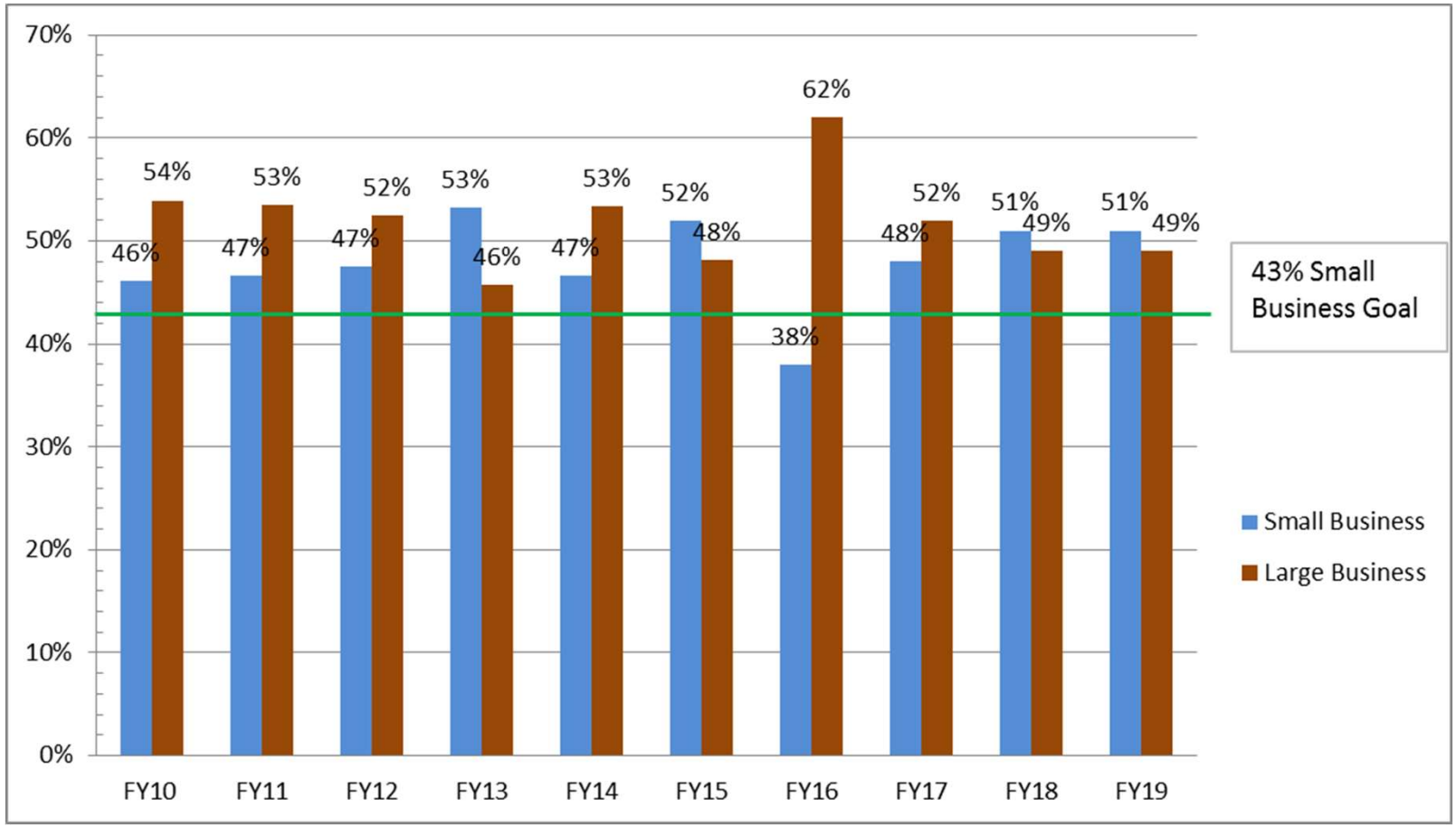
Multiple Awards – Trends and Projection



Managing risk and costs through our contracts

Environmental Acquisition Strategy
Metrics

Small Business – Trends and Projection



Promoting our broad industry base

EVBL Acquisition Process Optimization Initiative

Challenge:

- Prolonged cycle time for environmental (EV) contract action awards

Considerations:

- Environmental Business Line Acquisition Strategy: How have the types of contracts that we have promoted within our strategy impacted time-to-award (e.g. EMACs)?
- Workforce shaping: Are we supporting a workforce of the right size, capability and location?
- Efficient Processes: Are there opportunities to streamline what we do?

Take away:

- EV and ACQ team issue that will require a team approach to solve

The ER Workforce Management Strategy (WMS)

- **ER WMS is increasingly important as the emphasis of the ER Program shifts, new challenges arise, and resources become more limited**
  - **Maintain Command capability through our most important asset**
  - **Expands on the NAVFAC Strategic Plan and Environmental Community Management Plan**
  - **In support of the ER,N and BRAC cleanup programs**

- **Based on ER Forecast of the Fiscal and Technical Landscape**

- **Developed on Two Pillars:**
  - ***Pillar 1 – Projection of Appropriate Workforce Size***
    - Leads to understanding of the capabilities and productivity rate of the workforce
    - Informs the management of necessary changes to meet future program needs
  - ***Pillar 2 - Maintaining and Enhancing Technical Strength***
    - Targets the development of RPM and RTM core competencies

Maintaining a strong workforce is critical to meeting the mission

WMS Forecast of Fiscal and Technical Landscape

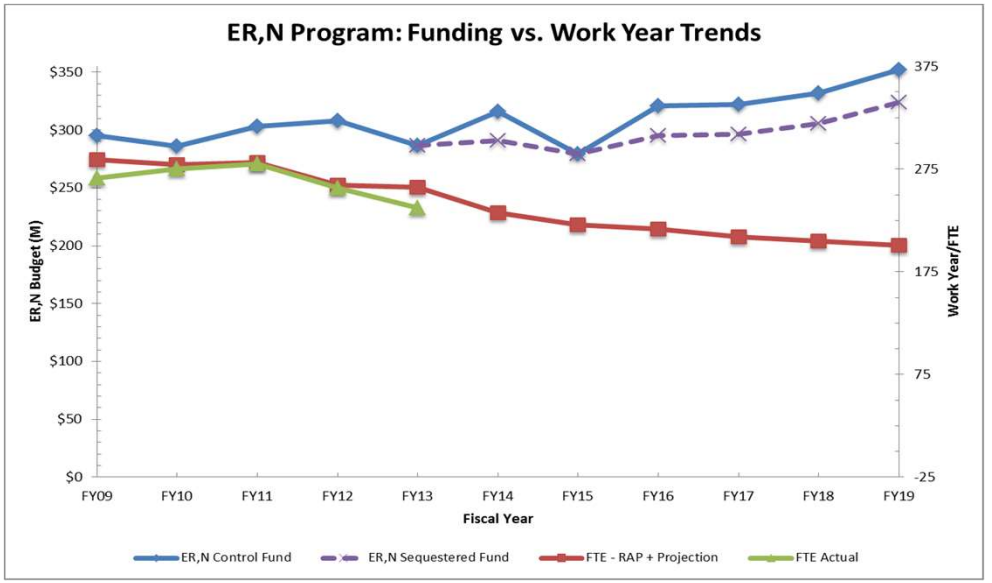
- **OSD Program Expectations:**
  - **Meeting Response Complete on ER Program sites of 90% by the EOY 2018 and 95% by the EOY 2021**
- **Critical program challenges:**
  - **Evolving financial climate**
  - **Changes in regulatory and program requirements**
    - **Emerging contaminants**
    - **Human health risks associated with vapor intrusion**
    - **General radioactive materials (GRAM)**
    - **Advancement of technologies, and increased awareness/interest in sustainability**
  - **Changes in program emphasis**
    - **Shift from site characterization/investigation to remedy design, implementation, and operation**
    - **Management of complex sediments and groundwater sites**
    - **Characterization and remediation of munitions-related contamination, and refining requirements at the MR in-water sites**

Planning for evolving fiscal and technical challenges

WMS Pillar 1
Projection of Appropriate ER,N Workforce Size

ER,N Program – Work Year Model (WYM)

- In use for over 10 years
- Developed in-house and has undergone refinement and rigorous validation process
- Incorporates:
  - Activity Complexity – based human health and environmental risks
  - Number of Active Sites – accounts for sites that have not achieved Response Complete
  - Program Dollar – accounts for costs -to - complete of all sites as well as the potentially large fluctuation in dollars from year-to-year
- Outputs are used as baseline in the resource allocation planning process



The algorithms used in the WYM are:

$$Total\ Work\ Year\ (WY) = WY\ IRP + WY\ MMRP \quad \text{(Equation 1)}$$

$$WY\ IRP\ or\ WY\ MRP = ACT\ Factor + \left(\frac{Site}{100}\right) Factor + WMAD\ Factor \quad \text{(Equation 2)}$$

$$WMAD = \sum_{CFY-2}^{CFY+1} (\ Average\ \$_{CFY_i}\ x\ WF_{CFY_i}\ ) \quad \text{(Equation 3)}$$

$$Average\ \$_{CFY_i} = \frac{(SF\ x\ CTC\ Study\$) + (CF\ x\ CTC\ Cleanup\$) + (RLF\ x\ CTC\ RAO\$)}{\$1{,}000K} \quad \text{(Equation 4)}$$

Where:

ACT – Activity Complexity Factor

WF – Weight Factor

RAO – Remedial Action Operation & Long Term Management Factor

WMAD – Weighted Moving Average Dollar Factor

SF – Study Factor

Site – Active Sites/Remaining Sites not RC Factor

CF – Cleanup Factor

Activity Complexity

CTC > $ 20 M = high
CTC $ 10 M– $ 20 M = med
CTC $ 0.1 M– $ 10 M = low
CTC < $ 0.1 M = zero

Sum of FEC Composite Risk:
Risk > 30 = high
Risk 15 – 29 = med
Risk 1 - 14 = low
Risk 0 = zero

		C 0	T L	C M	SS H
R	0	00	0L	0M	0H
I	L	L0	LL	LM	LH
S	M	M0	ML	MM	MH
K	H	H0	HL	HM	HH

Maintaining a right-sized organization

WMS Pillar 2
Maintaining and Enhancing Technical Competency

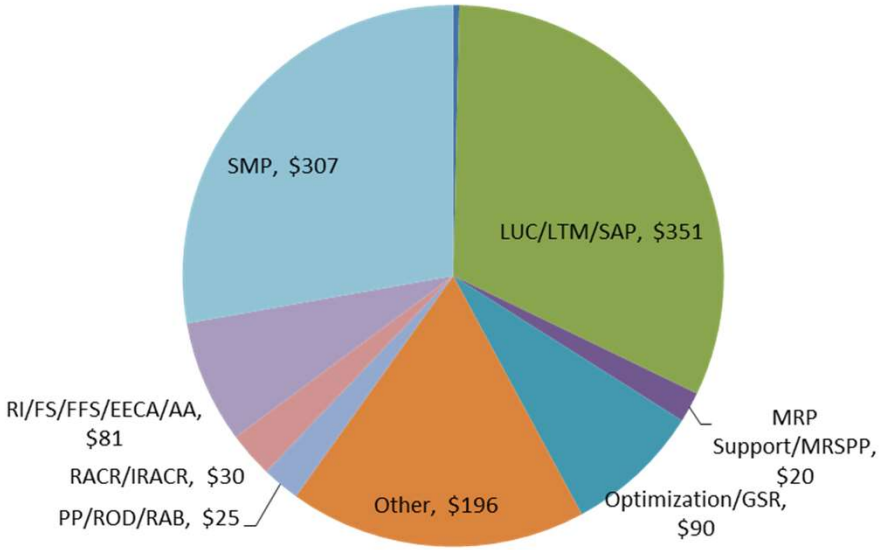
Focus Area 1 - Retooling training opportunities

- Innovative Remediation Technologies/Approaches (IRTA) Area – emerging contaminants, GSR, VI, and the long-term management for groundwater contamination sites
- Munitions Response (MR) Area – advanced sensors for land and water sites, risk assessment and remediation approaches
- Contaminated Sediment Area – characterization and remediation approaches for sediment sites
- Radiological Area –Historical Radiological Assessment (HRA) processes and mitigation approaches for the GRAM
- Environmental Acquisition and Cost Estimating Area

Focus Area 2 - Improving the In House Project Delivery Capacity

- Effective tools for improving and maintaining the workforce technical competency
- Average Annual Cost saving: $2M

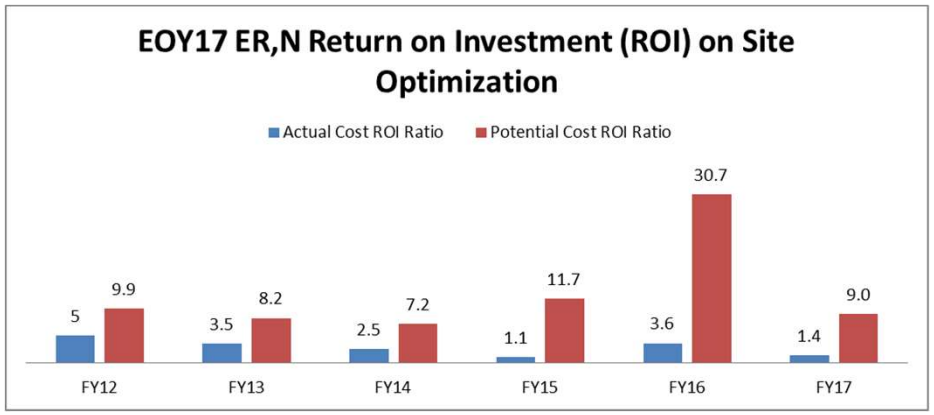
EOY17 ER,N In-House Project Cost Saving ($K) - By Type



Training and retooling for the future

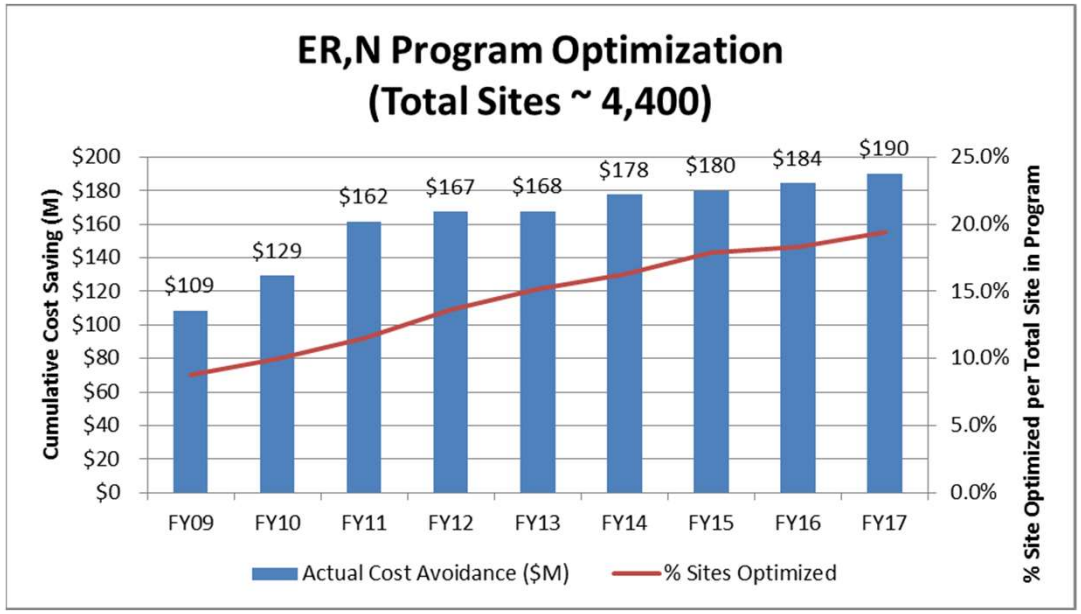
Optimization Program

Optimizing our Optimization Efforts



ER,N Site Optimization Results FY17		
Optimization Study/Review Costs	Actual Cost Avoidance	Potential Cost Avoidance
$1.3K (21 sites)	**$5.9K**	**$24K**

- **Ongoing optimization is critical to program success**
- **Optimization program must continue to evolve**
- **Increased focus on programmatic processes to identify and execute optimization efforts**
- **Engage early-on and throughout the lifecycle of the site**
- **Leverage in-house technical resources and expertise**



Making every dollar count

System Updates

- **NORM**
  - **Undergoing major system modernization**
  - **Focus on upgrading technology stack, hosting and security**
  - **No major changes in look/feel and functionality**

- **NIRIS**
  - **Central to site documentation and data management**
  - **GIS and other analytical tools**
  - **Land use controls**

- **Key Focus:**
  - **Tighter integration between NORM and NIRIS**

Our systems are central to our business process

Environmental Liabilities Audit

- Ernest and Young have initiated full Navy audit in FY 18

- NORM CTC estimates are fundamental to EL and Budget Development
  - Updated regularly to reflect latest known site conditions

- Estimate documentation is the key:
  - ❑Level 3 Audit Report Summary: Site Description, Cleanup Approach, Assumptions, References, etc.
  - ❑Cost Estimate Documents (WBS, quantities, rates, totals, etc.)
  - ❑Supporting Documents (e.g. FS reports, contract costs, etc.)
  - ❑Ensure documents are clear, transparent, traceable and well referenced

- Sustain estimating processes
  - Ensure detailed engineering estimates, and removal of parametric models
  - Ensure proper documentation
  - Annual training requirements
  - Annual mid-year submits are most critical

ER Program Focus Areas

- Complex Sites
  - Groundwater
  - Sediments
- Emerging Contaminants
  - PFAS
  - 1-4 Dioxane
  - TCE Vapor Intrusion
- Munitions
  - Advance Geophysical Classification
  - Leveraging advance Navy underwater tech
- Radiological
  - Historical Radiological Assessments